

# Advanced Java Programming

## 進階 Java 程式設計

教師：王國華

辦公室：資訊工程系 SF623 室

電話：02-29053698

E-mail: [khwang@csie.fju.edu.tw](mailto:khwang@csie.fju.edu.tw)

助教：林子傑

E-mail: [406261597@gapp.fju.edu.tw](mailto:406261597@gapp.fju.edu.tw)

課後解決修課同學疑難時段（office hours）：未定

### 教學目標

This course will teach students new features in Java 8 and Java 9 including generic programming, streams, Lambdas, regular expressions, enhanced java concurrency, and Optional. Junit will be also introduced for unit testing of Java programs.

### 教科書

“Modern Java in Action”, Raoul-Gabriel Urma, Mario Fusco, and Alan Mycroft, Manning Publications Co., 2019.

### 參考書及資料

1. “Java Language Features”, Kishori Sharan, 2nd Edition, Apress., 2018.
2. “Modern Java Recipes”, Ken Kousen, O’Reilly Media, Inc., 2017.
3. “Functional Interfaces in Java”, Ralph Lecessi, Apress, 2019.

### 課程綱要

- SOLID Design Principles and Design Patterns
- Fundamentals – Lambda expressions
- Functional-Style Data Processing – Streams, Collections data with streams
- Effective Programming with Streams and Lambdas
- Java Regular Expressions
- Everyday Java – Optional, New Date and Time API
- Enhanced Java Concurrency – CompletableFuture and reactive programming
- Unit Testing – JUnit

### 授課方式：

- 課堂講解【投影片】
- 範例程式練習【SF645】

### 評分方式

上課點名：10%，可缺課 3 次不扣分，超過 3 次，每次請假扣 1 分，不假缺課扣 2 分。

分組(3 人/組)程式(報告)作業：40%，期中考(分組報告+上機考)：25%，期末考(分組報告+上機考)：25%。